

FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE

ATTY. DOCKET NO.  
NE063

SERIAL NO.

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use several sheets if necessary)

(37 CFR 1.98(b))

APPLICANT  
Nobuyuki ISHIWATA et al.

FILING DATE  
December 3, 1998

GROUP

U.S. PTO  
09/204222  
12/03/98

**U.S. PATENT DOCUMENTS**

| EXAMINER<br>INITIAL |    | PATENT NUMBER | ISSUE<br>DATE | PATENTEE | CLASS | SUB<br>CLASS | FILING DATE<br>IF APPROPRIATE |
|---------------------|----|---------------|---------------|----------|-------|--------------|-------------------------------|
|                     | AA |               |               |          |       |              |                               |
|                     | AB |               |               |          |       |              |                               |
|                     | AC |               |               |          |       |              |                               |
|                     | AD |               |               |          |       |              |                               |
|                     | AE |               |               |          |       |              |                               |
|                     | AF |               |               |          |       |              |                               |
|                     | AG |               |               |          |       |              |                               |
|                     | AH |               |               |          |       |              |                               |
|                     | AI |               |               |          |       |              |                               |
|                     | AJ |               |               |          |       |              |                               |
|                     | AK |               |               |          |       |              |                               |

**FOREIGN PATENT OR PUBLISHED FOREIGN PATENT APPLICATION**

|     |    | DOCUMENT NO. | PUBL.<br>DATE | COUNTRY OR PATENT OFFICE | CLASS | SUB<br>CLASS | TRANSLATION<br>YES NO |
|-----|----|--------------|---------------|--------------------------|-------|--------------|-----------------------|
| WOK | AL | 5-63254      | 3/93          | Japan                    | —     | —            | NO                    |
| WOK | AM | 8-70148      | 3/96          | Japan                    | —     | —            | NO                    |
| WOK | AN | 8-70149      | 3/96          | Japan                    | —     | —            | NO                    |
| WOK | AO | 9-209292     | 4/97          | Japan                    | —     | —            | NO                    |
| WOK | AP | 6-244477     | 9/94          | Japan                    | —     | —            | NO                    |

**OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)**

|     |    |  |
|-----|----|--|
| WOK | AR | R.P. Hunt, "A Magnetoresistive Readout Transducer," 1971, pp. 150-154, <u>IEEE Trans. On Magn.</u>   |
| WOK | AS | C. Tsang et al., "Design, Fabrication & Testing of Spin-Valve Read Heads for High Density Recording," 1994, pp. 3801-3806, <u>IEEE Trans. On Magn.</u>   |
| WOK | AT | J. Moodera et al., "Ferromagnetic-insulator-ferromagnetic tunneling: Spin-dependent tunneling and large magnetoresistance in trilayer junctions (invited)," April 15, 1996, pp. 4724-4729, <u>J. Appl. Phys.</u> , Vol. 79.. |

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|-----|----|--------------|---------------|--------------------------|-------|--------------|-----------------------|
| WIK | AL | 8-316548     | 11/96         | Japan                    |       |              | NO                    |
|     | AM |              |               |                          |       |              |                       |
|     | AN |              |               |                          |       |              |                       |
|     | AO |              |               |                          |       |              |                       |
|     | AP |              |               |                          |       |              |                       |

**OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)**

|     |    |   |
|-----|----|---|
| WIK | AR | NIKKEI ELECTRONICS article, No. 686, April 7, 1997.   |
| WIK | AS | N. Tezuka et al., "Relationship between the Barrier and Magnetoresistance Effect in Ferromagnetic Tunneling Junctions," 1997, pp. 493-496, 1997 Journal of Japan Applied Magnetism Society (Vol. 21). |
|     | AT |   |

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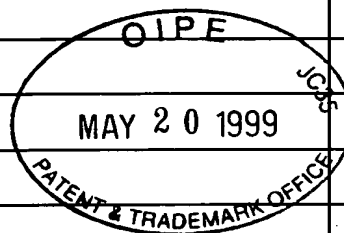
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|                     | AB |               |               |          |       |              |                               |
|                     | AC |               |               |          |       |              |                               |
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|                     | AG |               |               |          |       |              |                               |
|                     | AH |               |               |          |       |              |                               |
|                     | AI |               |               |          |       |              |                               |
|                     | AJ |               |               |          |       |              |                               |
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|-----|----|--------------|---------------|--------------------------|-------|--------------|-----------------------|
| WJK | AL | 4-103014     | 4/92          | Japan                    | /     | —            | NO                    |
| WJK | AM | 5-151533     | 6/93          | Japan                    | —     | —            | NO                    |
| WJK | AN | 9-282616     | 10/97         | Japan                    | —     | —            | NO                    |
| WJK | AO | 60-113313    | 6/85          | Japan                    | —     | —            | NO                    |
| WJK | AP | 61-126618    | 6/86          | Japan                    | —     | —            | NO                    |

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|  | AR |  |
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